and arrangement of the monomers in the organic polymer is selected so that the first, second and third bandgaps are distinct from one another in the polymer."

IN THE CLAIMS:

Please amend claims 1, 41-43, 45, 48 and 56 as follows:

1. An organic polymer having a plurality of regions along the length of the polymer backbone and comprising two or more of the following:

(i) a first region for transporting negative charge carriers and having a first bandgap defined by a first LUMO level and a first HOMO level; and

(ii) a second region for transporting positive charge carriers and having a second bandgap defined by a second LUMO level and a second HOMO level; and

(iii) a third region for accepting and combining positive and negative charge carriers to generate light and having a third bandgap defined by a third LUMO level and a third HOMO level,

wherein each region comprises one or more monomers and the quantity and arrangement of the monomers in the organic polymer is selected so that the first, second and third bandgaps are distinct from one another in the polymer, and wherein there is no cross-linking functionality on the polymer.

41. An organic polymer according to claim 6, wherein the second region additionally comprises a fifth monomer comprising a further second monomer as defined in claim 6, which is different from the second monomer.

42. An organic polymer having a plurality of regions along the length of the polymer backbone and comprising all three of the following:

(i) a first region for transporting negative charge carriers and having a first bandgap defined by a first LUMO level and a first HOMO level; and

(ii) a second region for transporting positive charge carriers and having a second bandgap defined by a second LUMO level and a second HOMO level; and

(iii) a third region for accepting and combining positive and negative charge carriers to generate light and having a third bandgap defined by a third LUMO level and a third HOMO level,

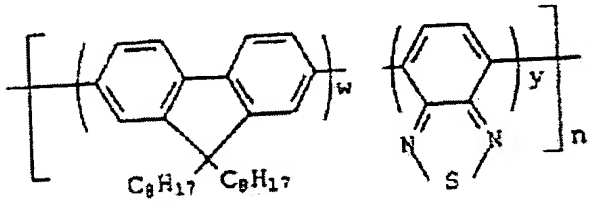
wherein each region comprises one or more monomers and the quantity and arrangement of the monomers in the organic polymer is selected so that the first, second and third bandgaps are distinct from one another in the polymer.

43. An organic polymer according to claim 42, wherein the third region is in a layer between the anode and the cathode and when a voltage is applied emits light with a wavelength in the range 600 nm to 700 nm.

45. An organic polymer according to claim 42, wherein the third monomer region is in a layer between the anode and the cathode and when a voltage is applied emits light having a wavelength in the range 500 nm to 600 nm.

48. An organic polymer according to claim 42, wherein the third monomer region is in a layer between the anode and the cathode and when a voltage is applied emits light having a wavelength in the range 400 nm to 500 nm.

56. An organic polymer according to claim 55, having a formula as shown in Formula XXXVI:



(XXXVI)

wherein w + y = 1, w ≥ 0.5 and y ≤ 0.5 and n ≥ 2.

Please add the following new claims 66-117:

66. An organic polymer having a plurality of regions along the length of the polymer backbone and comprising two or more of the following:

(i) a first region for transporting negative charge carriers and having a first bandgap defined by a first LUMO level and a first HOMO level; and

(ii) a second region for transporting positive charge carriers and having a second bandgap defined by a second LUMO level and a second HOMO level; and

(iii) a third region for accepting and combining positive and negative charge carriers to generate light and having a third bandgap defined by a third LUMO level and a third HOMO level,

wherein each region comprises one or more monomers and the quantity and arrangement of the monomers in the organic polymer is selected so that the first, second and third bandgaps are distinct from one another in the polymer, and wherein the first region comprises a first monomer comprising a substituted or unsubstituted fluorene group.

67. An organic polymer according to claim 66, wherein the first monomer comprises a 2,7- linked dialkyl fluorene group.

68. An organic polymer according to claim 67, wherein the 2,7- linked dialkyl fluorene group is a 9,9 dioctyl flourene group.

69. An organic polymer according to claim 66, wherein the second region comprises a second monomer comprising a substituted or unsubstituted aromatic or heteroaromatic group.

70. An organic polymer according to claim 69, wherein the second monomer comprises a triarylamine unit having the general formula ~~-[~~Ar_3N~~]-~~ wherein each Ar is the same or different and comprises a substituted or unsubstituted aromatic or heteroaromatic group.

71. An organic polymer according to claim 69, wherein at least one Ar comprises a substituted or unsubstituted phenyl group.

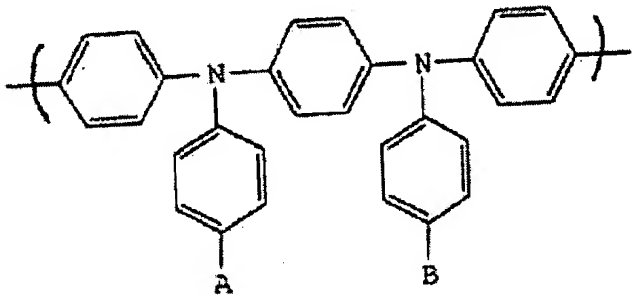
72. An organic polymer according to claim 70, wherein at least one Ar comprises a substituted or unsubstituted aromatic or heteroaromatic side group that is pendent to the polymer backbone.

73. An organic polymer according to claim 72, wherein the side group comprises a substituted or unsubstituted aryl group.

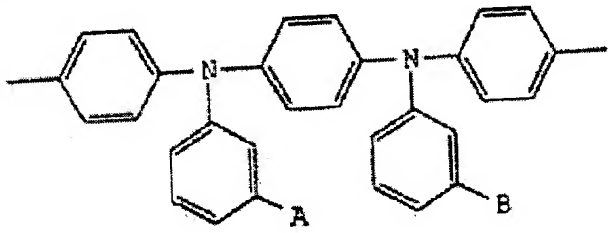
74. An organic polymer according to claim 73, wherein the side group comprises an unsubstituted phenyl or a monosubstituted or 3,5-disubstituted phenyl group.

75. An organic polymer according to claim 72 wherein the side group has a subsitutent group comprising a substituted or unsubstituted alkyl, perfluoroalkyl, alkylaryl, arylalkyl, heteroaryl, aryl, alkoxy, thioalkyl or cyano group.

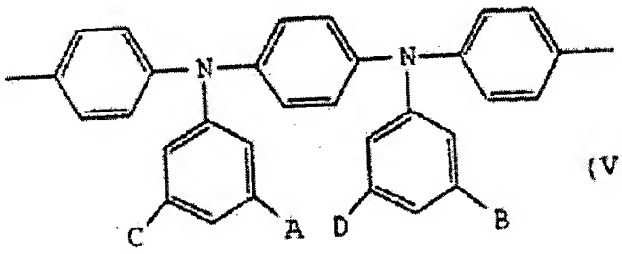
76. An organic polymer according to claim 75, wherein the triarylamine unit comprises a group having a formula as shown in any one of Formulas IV, V or VI:



(IV)



(V)



(VI)

77. An organic polymer according to claim 75, wherein one or more of X, Y, A, B, C and D is independently selected from the group consisting of hydrogen,

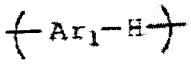
alkyl, aryl, perfluoroalkyl, thioalkyl, cyano, alkoxy, heteroaryl, alkylaryl, and arylalkyl groups.

78. An organic polymer according to claim 77, wherein one or more of X, Y, A, B, C and D is independently selected from the group consisting of an unsubstituted, isobutyl group, an n-alkyl, an n-alkoxy or a trifluoromethyl group.

79. An organic polymer according to claim 77, wherein X and Y or A, B, C and D are the same.

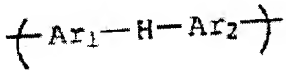
80. An organic polymer according to claim 1, wherein the third region comprises a third monomer comprising a group H which is an aromatic or heteroaromatic diazine group fused to a benzene or thiophene group.

81. An organic polymer according to claim 80, wherein the third monomer comprises a group having a formula as shown in Formula IX:



wherein Ar_1 is a substituted or unsubstituted aromatic or heteroaromatic group.

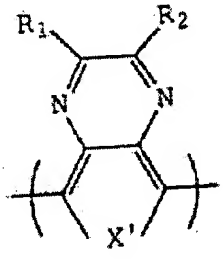
82. An organic polymer according to claim 81, wherein the third monomer comprises a group having a formula as shown in Formula X:



wherein Ar_2 is a substituted aromatic or heteroaromatic group and Ar_1 is as defined in claim 20.

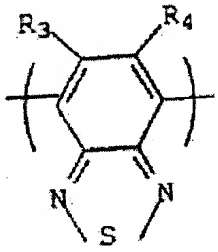
83. An organic polymer according to claim 81, wherein Ar_1 or Ar_2 independently comprises a substituted or unsubstituted, fused or unfused benzene, thiophene, furan, quinoxaline, biphenyl or fluorene group.

84. An organic polymer according to claim 80, wherein the third monomer comprises a group having a formula as shown in Formula VIII:



wherein X' is RC=CR or S and R_1 and R_2 are the same or different and are each a substituent group.

85. An organic polymer according to claim 80 wherein the third monomer comprises a group having a formula as shown in Formula XI:



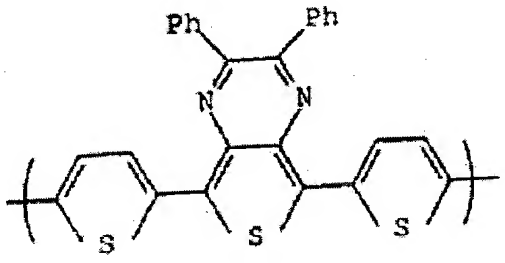
wherein R_3 and R_4 are the same or different and are each independently a substituent group.

86. An organic polymer according to claim 84, wherein one or more of R_1 ,R_2, R_3, and R_4 is each independently selected from hydrogen, alkyl, aryl,

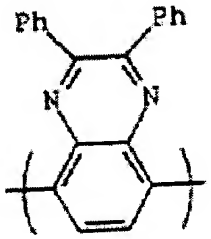
perfluoroalkyl, thioalkyl, cyano, alkoxy, heteroaryl, alkylaryl, arylalkyl, pyridine or furan.

87. An organic polymer according to claim 86, wherein R_1 and R_2 or R_3 and R_4 are the same and are each a phenyl group.

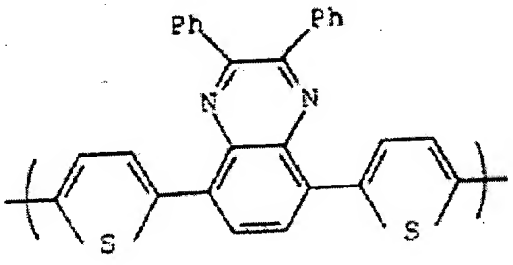
88. An organic polymer according to any one of claim 84, wherein the third monomer comprises a group having a formula as shown in any one of Formulas XIII to XVII:



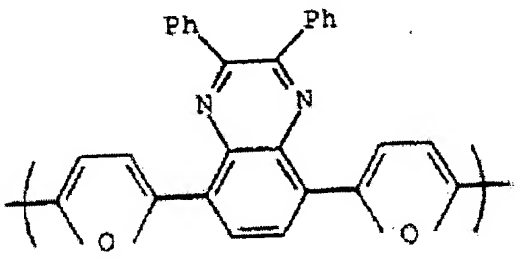
(XIII)



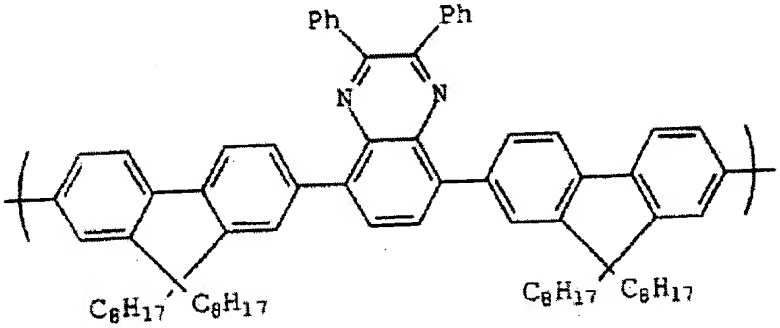
(XIV)



(XV)

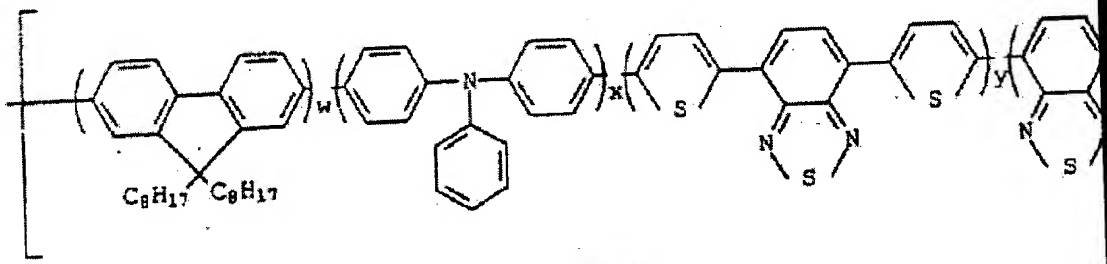


(XVI)

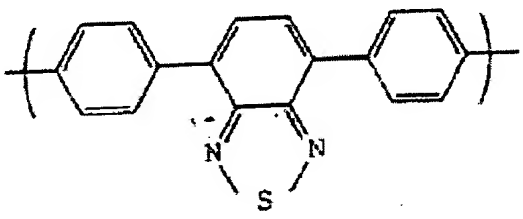


(XV

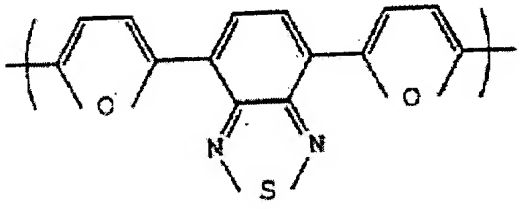
89. An organic polymer according to claim 84, wherein the third monomer comprises a group having a formula as shown in any one of Formulas XVIII to XXVI:



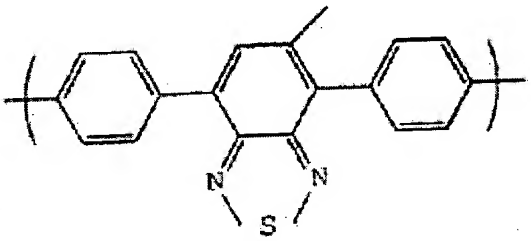
XXVIII



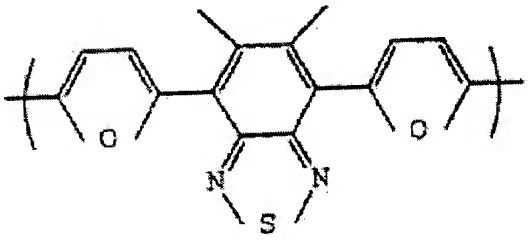
(XIX)



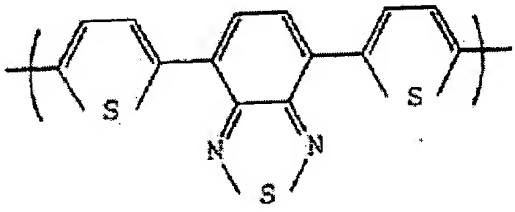
(XX)



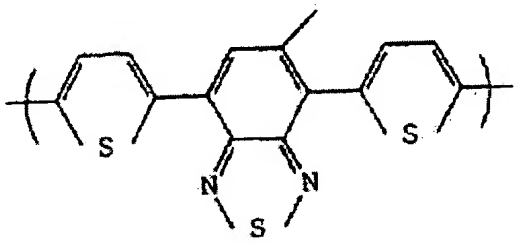
(XXI)



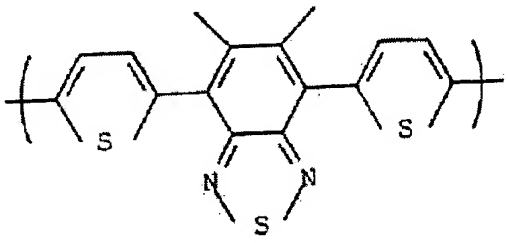
(XXII)

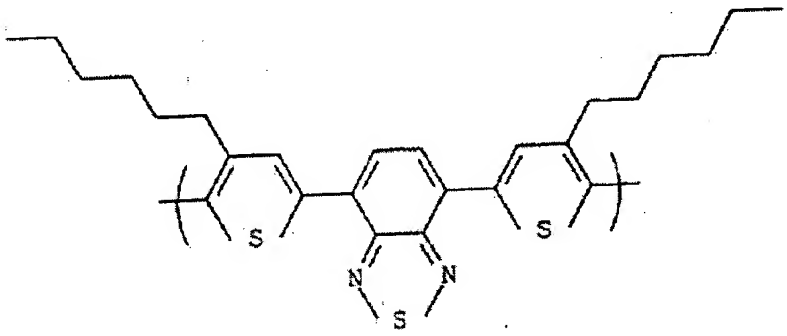


(XXIII)



(XXIV)





(XX

90. An organic polymer having a plurality of regions along the length of the polymer backbone and comprising two or more of the following:

(i) a first region for transporting negative charge carriers and having a first bandgap defined by a first LUMO level and a first HOMO level; and

(ii) a second region for transporting positive charge carriers and having a second bandgap defined by a second LUMO level and a second HOMO level; and

(iii) a third region for accepting and combining positive and negative

charge carriers to generate light and having a third bandgap defined by a third LUMO level and a third HOMO level, wherein each region comprises one or more monomers and the quantity and arrangement of the monomers in the organic polymer is selected so that the first, second and third bandgaps are distinct from one another in the polymer, wherein the third region comprises a third monomer comprising a triarylamine unit.

91. An organic polymer according to claim 90, wherein the third monomer comprises a group having the formula $-[(-Ar_2N-)-Ar-(-NAr_2-)]-$, wherein each Ar is the same or different and comprises a substituted or unsubstituted aromatic or hteteroaromatic group.

92. An organic polymer according to claim 91, wherein at leat one Ar comprises a substituted or unsubstituted aryl group.

93. An organic polymer according to claim 92, wherein the at least one Ar comprises an unsubstituted phenyl group.

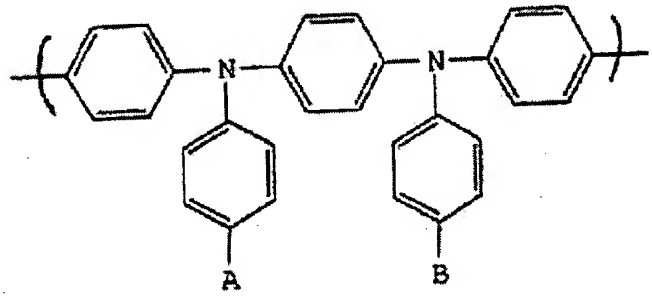
94. An organic polymer according to any one of claim 91, wherein at least one Ar comprises a substituted or unsubstituted aromatic or heteroaromatic side group that is pendent to the polymer backbone.

95. An organic polymer according to claim 94, wherein the side group comprises fused or unfused benzene, thiophene, furan, quinoxaline, biphenyl or fluorene group.

96. An organic polymer according to claim 95, wherein the side group comprises a monosubstitued phenyl group.

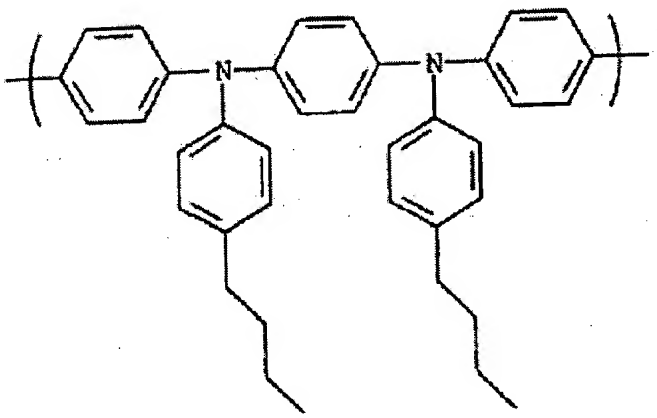
97. An organic polymer according to claim 94, wherein the side group has a substituent group comprising hydrogen or a substituted or unsubstituted alkyl, perfluoroalkyl, alkylaryl, arylalkyl, heteroaryl, aryl, alkoxy, thioalkyl or cyano group.

98. An organic polymer according to claim 97, wherein the triarylamine unit comprises a group having a formula as shown in Formula IV



wherein A and B are the same or different and are substituent groups.

99. An organic polymer according to claim 98, wherein the third monomer comprises a group having a formula as shown in Formula XXVII:



100. An organic polymer having a plurality of regions along the length of the polymer backbone and comprising two or more of the following:

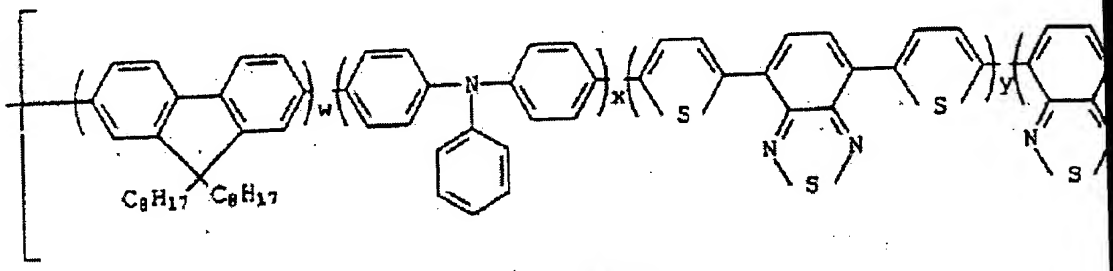
(i) a first region for transporting negative charge carriers and having a first bandgap defined by a first LUMO level and a first HOMO level; and

(ii) a second region for transporting positive charge carriers and having a second bandgap defined by a second LUMO level and a second HOMO level; and

(iii) a third region for accepting and combining positive and negative charge carriers to generate light and having a third bandgap defined by a third LUMO level and a third HOMO level, wherein each region comprises one or more monomers and the quantity and arrangement of the monomers in the organic polymer is selected so that the first, second and third bandgaps are distinct from one another in the polymer, wherein the first region additionally comprises a fourth monomer comprising a further substituted or unsubstituted aromatic or heteroaromatic group.

101. An organic polymer according to claim 100 wherein the further substituted or unsubstituted aromatic or heteroaromatic group comprises a group as shown in formula XI wherein R_3 and R_4 are both hydrogen.

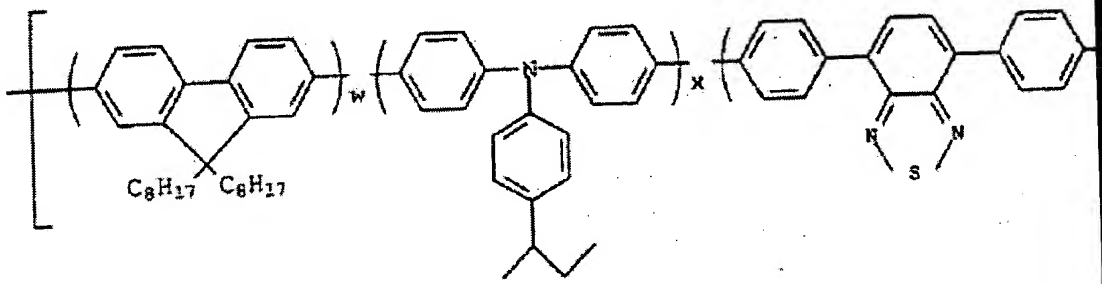
102. An organic polymer according to claim 1 and comprising all three regions, and having a formula as shown in Formula XXVIII:



XXVIII

wherein $w + x + y + z = 1$, $w \geq 0.5$, $0 \leq x + y + z \leq 0.5$ and $n \geq z$.

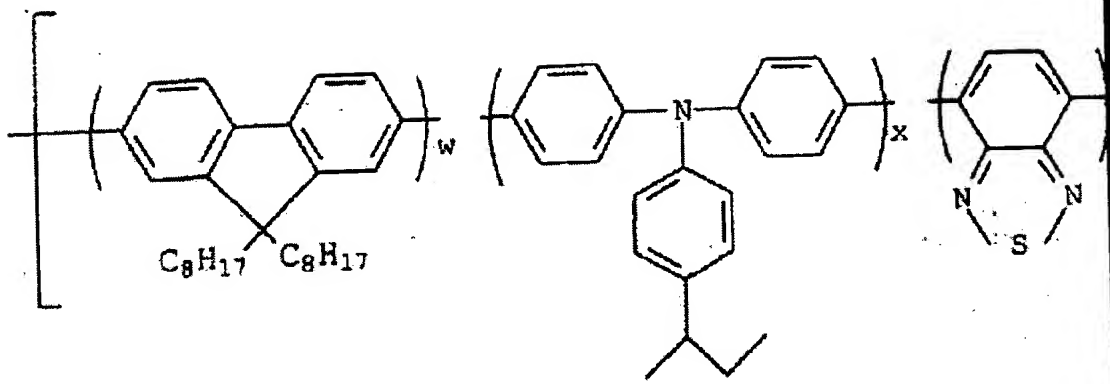
103. An organic polymer according to claim 1 and comprising all three regions and having a formula as shown in Formula XXIX:



(XXIX)

wherein $w + x + y = 1$, $w \geq 0.5$, $0 \leq x + y \leq 0.5$ and $n \geq 2$.

104. An organic polymer according to claim 1 and comprising all three regions and having a formula as shown in Formula XXX:

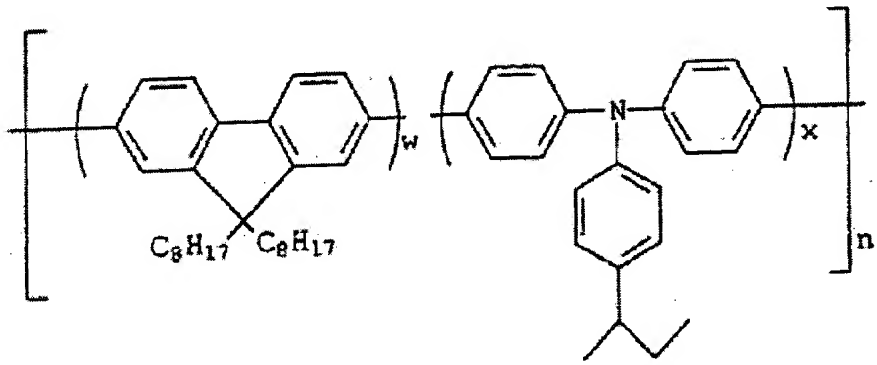


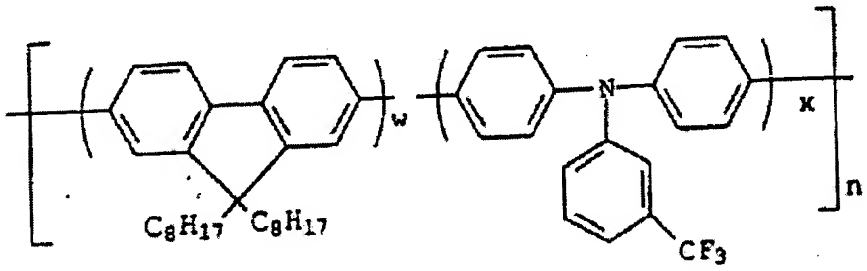
(XXX)

wherein w + x + y = 1, w ≥ 0.5, 0 ≤ x + y ≤ 0.5 and n ≥ 2.

105. An organic polymer according to claim 1, and comprising the first and second regions.

106. An organic polymer according to claim 105, having a formula as shown in Formula XXXII or XXXIII:

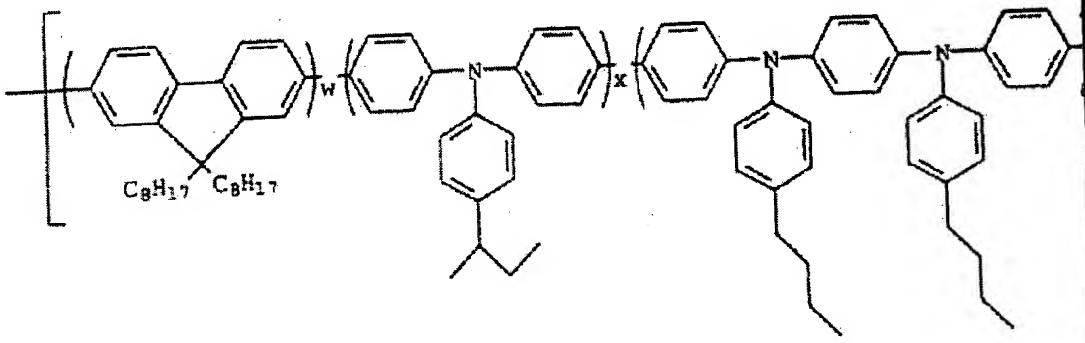




(XX

wherein w + x = 1, w ≥ 0.5, x ≤ 0.5 and n ≥ 2.

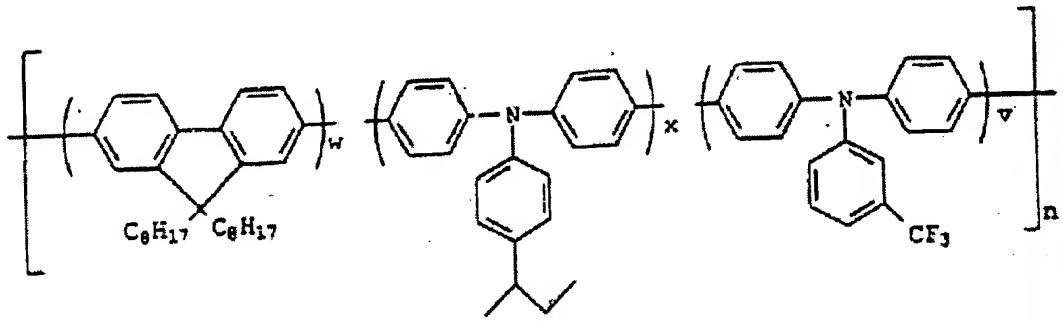
107. An organic polymer according to claim 106, having a formula as shown in Formula XXXI:



(XXXI)

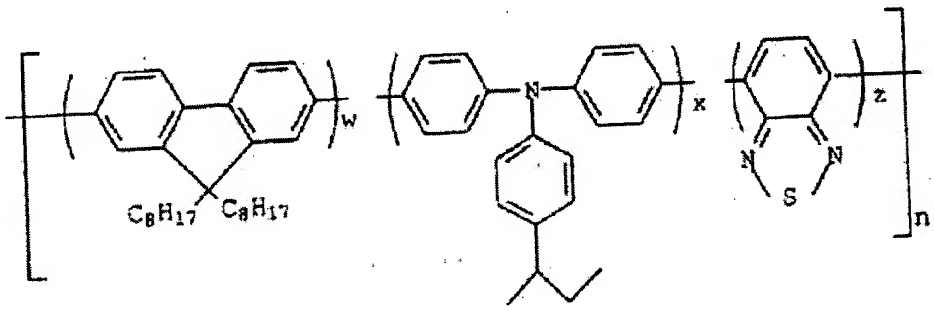
wherein w + x + y = 1, w ≥ 0.5, 0 ≤ x + y ≤ 0.5 and n ≥ 2.

108. An organic polymer according to claim 105, having a formula as shown in Formula XXXIV:



wherein $w + x + v = 1$, $w \geq 0.5$, $0 \leq x + v \leq 0.5$ and $n \geq 2$.

109. An organic polymer according to claim 105, having a formula as shown in Formula XXXV:



wherein $w + x + z = 1$, $w \geq 0.5$, $0 \leq x + z \leq 0.5$ and $n \geq 2$.

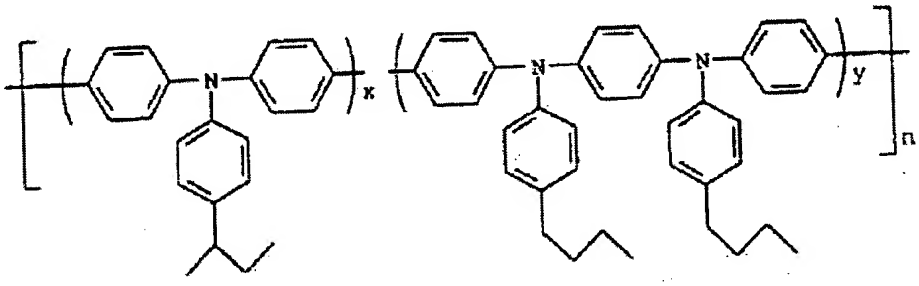
110. An organic polymer according to claim 105 which is blended with a light emissive material.

111. An organic polymer according to claim 1 and comprising the first and third regions, and blended with a hole transporting material.

112. An organic polymer according to claim 111, wherein the hole transporting material comprises a poly-triarylamine.

113. An organic polymer according to claim 1 and comprising the second and third regions.

114. An organic polymer according to claim 113, having a formula as shown in Formula XXXVII:



(XX

wherein x + y = 1, $x \geq 0.5$ and $y \leq 0.5$ and $n \geq 2$.

115. An organic polymer according to claim 113 which is blended with an electron transporting material.

116. An organic polymer according to claim 115, wherein the electron transporting material comprises poly-fluorene.

117. An electroluminescent device comprising an anode layer, a cathode layer, and a layer of an organic polymer situated between the anode layer and the cathode layer, the organic polymer having a plurality of regions along the length of the polymer backbone and comprising two or more of the following:

(i) a first region for transporting negative charge carriers and having a first bandgap defined by a first LUMO level and a first HOMO level; and

(ii) a second region for transporting positive charge carriers and having a second bandgap defined by a second LUMO level and a second HOMO level; and

(iii) a third region for accepting and combining positive and negative charge carriers to generate light and having a third bandgap defined by a third